

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A core for a shell die adapted for use in casting a turbine bucket including an airfoil portion, a shank portion and a mounting portion, the core comprising an elongated body shaped to create internal cooling passages in the bucket, said elongated body formed with at least one core support pin extending transversely of said elongated body and adapted to support the core inside the shell die, said at least one core support pin joined to said elongated body ~~by~~ at a fillet and ~~having an elliptical shape in cross section for reduction of stress at said fillet, said support pin adapted to engage a core support boss in the shell die in the shank portion; said core support pin having an elliptical shape in cross section providing for a reduction in stress at the fillet and an increase of stiffness in the core support pin.~~

2. (Original) The core of claim 1 wherein said at least one core support pin is tapered along its length.

3. (Cancelled).

4. (Original) The core of claim 1 wherein said at least one core support pin comprises three core support pins.

5. (Currently Amended) A shell die and core assembly adapted for use in casting turbine buckets comprising a shell die provided with a plurality of core support bosses having core support pin holes of elliptical shape therein, said core comprising an elongated body having a corresponding plurality of core support pins having an elliptical shape in cross section and adapted to be received in said core support pin holes, each of said core support pins joined to said elongated body ~~by at a fillet, and having elliptical cross-sectional shapes, and said core support pin holes having substantially identical elliptical shapes, such that stress is reduced at said fillet~~ said elliptical shapes reducing stress at the fillets and increasing stiffness of the core support pins.

6. (Original) The shell die and core of claim 5 wherein said elliptical cross-sectional shapes are defined by major and minor diameters (a, b), the major diameter aligned in a radial direction relative to the turbine bucket.

7. (Original) The shell die and core of claim 5 wherein each of said core support pins is tapered along its length.

8. (Cancelled).

WANG

Appl. No. 10/643,089

June 2, 2004

9. (Original) The shell die and core of claim 5 wherein said plurality of core support pins comprises three core support pins.

10. (Original) The shell die and core of claim 5 in further combination with a plug of elliptical cross-sectional shape adapted to seal an exit hole in a cast turbine bucket created by said core support pin.

11. (Cancelled.)